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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/921,862	08/02/2001	Tom L. Nguyen	042390P11859	7160

7590

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EXAMINER

VO, TIM T

ART UNIT

PAPER NUMBER

2112

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/921,862

Applicant(s)

NGUYEN, TOM L.

Examiner

Tim T. Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 14-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-7 is/are allowed.
- 6) ☒ Claim(s) 14, 17-19, 28 and 30 is/are rejected.
- 7) ☒ Claim(s) 15, 16, 18, 20-27 and 29 is/are objected to.
- 8) ☒ Claim(s) 8-10 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Part III DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in response to this action, to elect a single invention to which the claims must be restricted.

2. Group I, claims 1-7 and 14-30, drawn to interrupt processing, which is classified in class 710, subclass 260.
3. Group II, claims 8-13, drawn to active/idle mode processing, which is classified in class 713, subclass 323.
4. A telephone call was made to James Go on March 29, 2004 to request an oral election to the above restriction requirement. Mr. Go elected group I (claims 1-7, 14-30) without traverse and cancelled non-elected claims 8-13.
5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventor ship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventor ship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

Notice to Applicant(s)

6. This application has been examined. Claims 1-7 and 14-30 are pending.

Claim Rejections - 35 USC § 112

7. Claims 20-27 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. As for claim 20, the phrase, "sending an interrupt request signal, after entering the interrupt mode, to the host device in response to the interrupt data", causes the claim to be vague and indefinite because the claim's language does not clearly indicate the client or the host is the one that 1) sending an interrupt request signal or 2) entering the interrupt mode. Examiner suggests correction by replacing the phrase above with "after entering the interrupt mode, sending an interrupt request signal to the host device in response to the interrupt data".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 14, 17, 19 and 28-30 are rejected under 35 U.S.C. § 102(b) as being anticipated by Envoy et al. patent number 5,58,020 referred hereinafter "Envoy".

As for claim 14, Envoy teaches a client device, comprising:

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a serial bus port (see figure 1, client devices are 114, 116, 118 are connecting the root hub 111 via USB bus), the serial bus port to be coupled to a host device (see figure 1, client devices such 114, 116, 118 are coupling to the computer system 122); and

an interrupt logic element coupled to the serial bus port (see figure 1, RAM 106 and column 5 lines 5-17, wherein RAM 106 contains instructions such as polling each clients 114, 116, 118 connecting to the computer system 122 to determine which clients desire to perform transactions over the USB), the interrupt logic element to indicate to the client device to enter an interrupt mode in response to the interrupt logic element receiving a set interrupt mode signal (see column 5 lines 5-34, wherein the interrupt logic contains in the RAM 106 for storing programmable instructions such polling clients 114, 116, 118 every 1 ms. Further, the computer system 122 demonstrates the polling operation by sending out the SOF frame interrupt (figure 3) to each clients 114, 116, 118 and each of the client responses to the SOF frame interrupt to indicate whether transaction occurs from the clients 114, 116, 118).

As for claim 17, Envoy teaches a non-interrupt capable interface, the non-interrupt capable interface to be enable when coupling the client device to a non-interrupt capable hub device or a non-interrupt capable host device (see figure 1 and column 2 lines 49-51); and

an interrupt capable interface, the interrupt capable interface to be enable when coupling the client to the interrupt capable hub device and/or interrupt capable host device (see figure 1 and column 5 lines 5-34).

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As for claim 19, Envoy teaches the serial bus port comprises a universal serial bus port (see figure 1).

As for claim 28, Envoy teaches a machine-readable medium on which a plurality of machine instructions are stored that when executed by a machine performs the operations of:

entering a host device of a serial bus into an interrupt mode (see figure 1, computer system 122 and column 5 lines 18-20, wherein the polling operation is instructed by instructions stored in RAM106 to send out SOF every millisecond to the peripheral devices 114, 116, 118);

sending a set interrupt mode signal from a host device to a client device coupled to the host device, the set interrupt mode signal to indicate to the client device to enter interrupt mode (see column 5 lines 10-34, wherein the computer system 122 sends out interrupt signal to clients 114, 116, 118 the SOF interrupt signal); and

receiving an interrupt request signal sent from the client device (see figure 5 and column 7 lines 18-52, wherein the client 116 such as light gun sending request signal to computer system 122); and

exiting the host device from the interrupt mode (see figure 7, End 709 for exiting interrupt mode).

As for claim 30, Envoy teaches the interrupt request signal further serves as a resume signal when received by the host device while not in the interrupt mode (see column 9 lines 14-23).

Allowable Subject Matter

10. Claims 1-7 are allowable over the prior of records.
11. Claims 15-18, 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
12. Claims 20-27 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Examiner's Statement of Reasons for Allowance

13. The following is an Examiner's statement of reasons for the indication of allowable subject matter: Claims 1, 20 are allowable over the prior art of record because the Examiner found neither prior art cited in its entirety, nor based on the prior art, found any motivation to combine any of the said prior arts. As for claim 1, prior art fails to teach the host device having a interrupt logic element to indicate to the host device to enter an interrupt mode, the, the host device to transmit a set interrupt mode signal onto the serial bus after entering the interrupt mode. As for claim 20, prior fails to teach the host device enters interrupt mode, wherein after the host enters the interrupt mode, the client sending an interrupt request signal to the host device in response to the interrupt data.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim T. Vo whose telephone number is 703-308-5862. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 703-305-4815. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tim T. Vo
Primary Examiner
Art Unit 2112

3/31/04